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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,109	04/14/2004	Douglas D. Coolbaugh	BUR920030083US1	3108

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EXAMINER

SHANKLE, ALEXANDER

ART UNIT PAPER NUMBER

2891

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/709,109	Applicant(s) COOLBAUGH ET AL.	
	Examiner Alexander J. Shankle	Art Unit 2891	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 13-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 6-12 is/are rejected.
- 7) ☒ Claim(s) 2-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4-14-04</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

Claims 13-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected product invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 4-17-06.

Claim Objections

Claim 1 is objected to because of the following informalities: the last element, "selecting at least one [sic: of] the individual second..."

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 6-8 and 10-12 are rejected under 35 U.S.C. 102(e) as being disclosed by Swanson '755:

Regarding claim 1, Swanson discloses a method of forming a precision element on a semiconductor substrate comprising the steps of: forming a first element in

a first region of a semiconductor substrate (¶34-35); forming a plurality of second elements in a second region of the substrate, the plurality of second elements comprising individual elements, the individual elements ranging in value about a desired value (¶37-39); measuring the value of the first element (¶36); comparing the measured value to a target value (¶40); and selecting at least one of the individual second elements corresponding to the result of the comparison (¶46-50).

Regarding claim 6, Swanson discloses the method of claim 1 wherein the first and the second elements include a passive element selected from the group consisting of a resistor, a capacitor, a diode and a transistor (¶40).

Regarding claim 7, Swanson discloses the method of claim 1 wherein the first and the second elements are resistors (¶40).

Regarding claim 8, Swanson discloses the method of claim 1 wherein said plurality of second elements are arranged in parallel to each other (Fig.8 Elements 814).

Regarding claim 10, Swanson discloses the method of claim 1 wherein said plurality of second elements are linked by fusible links or antifuses (¶25).

Regarding claim 11, Swanson discloses the method of claim 1 wherein said comparing is performed manually or electronically (¶27).

Regarding claim 12, Swanson discloses the method of claim 1 wherein the selecting includes a step of removing other second elements that are not

selected by blowing fusible links or by fusing antifuses that are present within said plurality of second elements (¶25-28).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swanson '755 in view of Birkner '136:

- a. Swanson discloses the method of claim 1 as set forth above. Swanson does not particularly point out said plurality of second elements comprised of three resistors arranged in parallel to each other.
 - i. Birkner discloses a plurality (e.g. three) of fusible semiconductor resistors connected in parallel to each other.
 - ii. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Swanson's method of selective fusing with Birkner's parallel resistors. The motivation for doing so would have been to adjust resistance to an acceptable value as taught by Swanson (¶40) and Birkner (Abstract).

Allowable Subject Matter

Claims 2-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Particularly, the known prior art would be overcome if the limitations of claim 2 were combined with claim 1.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- a. Muthukumaraswamy '227, Petit '264 and Rudin '483 are drawn to parallel "binary weighted" elements (e.g. resistors) for tuning circuit parameters.
- b. Bhattacharya et al '489 discloses placement of PCM structures on the cutting (i.e. scribe) lines of a product wafer as is well known to one of ordinary skill in the art.
- c. MacArthur '131 uses selection of redundant elements to improve semiconductor product yield.

USPTO CONTACT INFORMATION

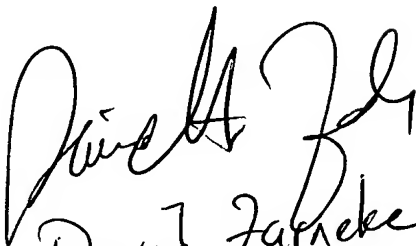
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex Shankle whose telephone number is 571-272-3476. The examiner can normally be reached on M-F 8am-5pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Baumeister can

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be reached at 571-272-1722. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. See <http://pair-direct.uspto.gov> for more information about the PAIR system. Contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) for clarification on access to the Private PAIR system.

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5/11/06